Forest Health Protection
Pacific Southwest Region

Date: August 25, 2015
File Code: 3400

To: Tom Hall, District Ranger, South Fork Management Unit

Subject: Trip report following initial site visit to Middle Hayfork Plantation Thin

At the request of Randi Paris and Leslie Warta, Shasta-Trinity Silviculture, a site visit was made to the Middle Hayfork Plantations September 9, 2014, where there is a proposal to treat approximately 6,000 acres of 30-40 year old plantations over several years. The objectives were to assess the current stand conditions for insect and disease activity and discuss suitability for WBBI funding. Leslie Warta, Heather Vanderven (Shasta-Trinity NF), and Cynthia Snyder (FHP) were present.

Background

The Middle Hayfork Plantations were planted to ponderosa pine (*Pinus ponderosa*) in the 1970-80s near the community of Hayfork in the South Fork Management Unit, Shasta-Trinity National Forest (Figure 1). These plantations lie within the Middle Hayfork Watershed, currently proposed as a qualifying landscape-scale insect and disease area under section 602 of the 2014 Farm Bill "to reduce the risk or extent of, or increase the resilience to, insect or disease infestation in the area(s)". The land use is designated as a mix of Wildland Urban Interface (WUI), Matrix, and Late Successional Reserve (LSR).

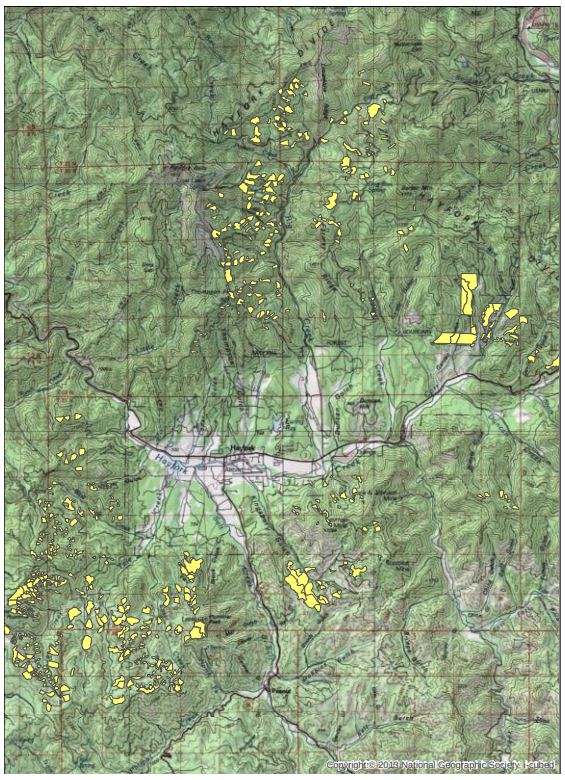

Figure 1. Map of Middle Hayfork Plantations around the community of Hayfork.

The Middle Hayfork Plantations are separated into two Units: Donaldson and Ice Cream. NEPA is complete under PCT and Fuels Treatment in Middle Hayfork Creek Watershed, NEPA covers 6,000 ac of plantations around the community of Hayfork. NEPA is complete for 6,000 acres under PCT and Fuels Treatment in Middle Hayfork Creek Watershed. Proposed treatment incudes hand thinning from below to retain and protect larger trees and increase

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diversity, and mastication where possible based on slope.

Observations

The plantations are both pine dominated (with hardwood ingrowth) and mixed conifer with approximately 500 trees per acre, BA is about 200 sqft/ac (Figures 2 and 3). These plantations have been largely ignored for the past 30 years and allowed to become overly dense. The Davidson portion are primarily ponderosa pine dominated, approximately 30 year old stands planted at about 10 foot spacing. Where survival was poor live oak and madrone have filled in. Average diameter is about 7-12 inches in the pine with some Douglas-fir and white seeding in naturally. The Ice Cream portion is a little older, about 40 years on average, and average diameter is 10-12 inches.

Figure 2. Donaldson Unit 21, dense ponderosa pine dominated plantation.

Figure 3. Ice Cream Unit A, ponderosa pine plantation.

Currently western pine beetle found in one Donaldson stand, some Ips can be found causing topkill at the edges of Ice Cream units. Western pine beetle, fir engraver beetle, and flatheaded fir borer are common throughout the Hayfork area (ADS 2013-14).

Discussion

The Forest has requested $50,000 to treat 125 acres; the South Fork Management Unit has the capability to treat more acres if there is available funding. Per acre costs are approximately $400 and unit size tends to be at least 10 acres. The discussion centered on thinning from below to reduce BA to about 90 sqft/ac.

The area is at risk of continued western pine beetle-caused mortality in ponderosa pine due primarily to overstocking and drought. As with most bark beetles, the most economical and efficient means of management is to maintain trees and stands in a healthy condition. Stocking reduction and creation of diverse stand conditions reduce overall susceptibility to western pine beetle. Thinning was discussed and it was suggested

that treatment should bring the SDI down to a level where it would remain below 200 for a minimum of 20 years to meet the Region requirement of no less than 20 year re-entry for thinning. Patch thins would benefit the stands by providing both age class and species diversity by retaining true fir and other species.

If you have any questions regarding this report and/or need additional information, please contact Cynthia Snyder at 530-226-2437 or Pete Angwin at 530-226-2436.

/s/ Cynthia Snyder

CC: Randi Paris, Leslie Warta, Kathy Roche, Chris Losi, Sheri Smith, Phil Cannon, Chris Fischer, Sherry Hazlehurst, and Pete Angwin